Volume III

IDENTIFYING ISSUES FOR ARMY POLICY ANALYSIS

A Description of the Arroyo Center Program Development Process

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Management Directorate
Study Program Management Office
Washington, D.C. 20310

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BACKGROUND

Challenges facing the Army arise from many conditions and forces for change in the United States and abroad. Certain issues that should be addressed are clear since they stem from current conditions or from conditions obvious in the near term. But, many conditions likely to face the Army can impact on areas that involve long lead times. Thus, factors that can and should shape current policies and actions require insight about conditions many years in the future.

The Army Study Program Management Office (SPMO) established a program to spotlight issues in the post-POM period: from 1990 to at least 2000. The process described in this volume1 was directed at helping SPMO spotlight and rate issues important to Army policy. These issues, with their ratings and background information, were intended for use by the Arroyo Center Policy Committee (and the Center) to help formulate the policy analysis program of the Arroyo Center for fiscal year 1984. The fundamental purpose of the process was to provide Army top management a new communication mode with which to nominate and rate issues on the basis of a longer time horizon than the pressure of short-term problems often allows.

The process was developed and accomplished by The Futures Group, a management consulting firm specializing in planning, forecasting and policy analysis for government organizations and business firms here and abroad. The organization helps clients make decisions in light of uncertainties about the future and has developed techniques to help people realistically spotlight future possibilities, their implications and what could or should be done about those

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1 This volume is one of three. The other volumes are: Issues Important to Army Policy Analysis, Volume I—CONSENSOR™ Ratings Provided by the Arroyo Center Advisory Panel and Volume II—An Appendix of Issue Nominations Arranged in Descending Order of Importance, 11 October 1983.
conditions. The interview technique and workshop (using material developed in the interviews) were the two elements of the process used. They are two of the approaches developed and successfully used in the company's work since the early 1970s.
THE INTERVIEW SEQUENCE

A. Basic Design

Each interview was a private, anonymous discussion that was intended to obtain each respondent's views about conditions in the United States and abroad from 1990 to at least 2000, plus the issues they believed these conditions would create requiring current policy attention by the Army. To do this, each person was asked to nominate issues, along with his reasons (i.e., the conditions he foresaw). He or she then was asked to rate the issues in terms of their relative importance regarding current Army policy and actions.

The sequence of each interview generally followed the steps listed below:

I. Conditions in the United States and abroad that could create issues for the Army
   - What are the various socioeconomic, political, technological and other driving forces that are likely, or that could create, important challenges for the Army?
   - How might such forces combine or come together; i.e., what scenario(s) should be considered?

II. Issues created by these conditions
    - What specific issues are likely to be associated with the above conditions?
    - Why are these issues likely to exist; i.e., what are the linkages among the conditions you see and the issues they are likely to create?

III. Relative importance of each issue
    - What is the relative importance or priority that should be attached to each issue on the basis of its timing and impact on the Army, and thus on the current need to give attention to it from a policy analysis standpoint?
To accomplish these steps, a workbook or interview protocol was designed and provided to each interviewee as a read-ahead for his use in organizing his thoughts. This protocol described the objectives and sequence of the interview and potential substantive items. The substantive items were offered strictly as a point of departure or catalyst for the discussions. The read-ahead is shown in the appendix.

B. Interviewees

The interviewees included 20 top-management personnel on the Army Staff and Secretariat in the Pentagon. These persons are listed in Table I in the order in which they were interviewed.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Hollis</td>
<td>DUSA (OR)</td>
</tr>
<tr>
<td>Ms. Hoeber</td>
<td>PDASA (RDA)</td>
</tr>
<tr>
<td>MG Noah</td>
<td>D/PAED</td>
</tr>
<tr>
<td>Mr. Ambrose</td>
<td>USA</td>
</tr>
<tr>
<td>LTG Walker</td>
<td>C/NGB</td>
</tr>
<tr>
<td>LTG Peixotto</td>
<td>COA</td>
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<tr>
<td>Ms. Crawford</td>
<td>GC</td>
</tr>
<tr>
<td>MG Odom</td>
<td>ACSI</td>
</tr>
<tr>
<td>Mr. Spurlock</td>
<td>ASA (M&amp;RA)</td>
</tr>
<tr>
<td>Dr. Prather</td>
<td>DASA(RDA)</td>
</tr>
<tr>
<td>MG Berkman</td>
<td>C/ARO</td>
</tr>
<tr>
<td>LTG Thompson</td>
<td>DCSLOG</td>
</tr>
<tr>
<td>LTG Elton</td>
<td>DCSPER</td>
</tr>
<tr>
<td>Dr. Sculley</td>
<td>ASA (RDA)</td>
</tr>
<tr>
<td>BG Conrad</td>
<td>D/MD</td>
</tr>
<tr>
<td>Mr. Hillier</td>
<td>ASA (IL&amp;FM)</td>
</tr>
<tr>
<td>LTG Merryman</td>
<td>DCSRDA</td>
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<tr>
<td>LTG Brown</td>
<td>DAS</td>
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<tr>
<td>LTG Mahaffey</td>
<td>DCSOPS</td>
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<tr>
<td>GEN Thurman</td>
<td>VCSA</td>
</tr>
</tbody>
</table>
THE WORKSHOP

A. Preparation

More than 160 issues were nominated by the interviewees as important to current Army policy studies in light of post-POM conditions envisioned for the United States and abroad. Clearly, such a list was too extensive for rating by the Arroyo Center advisory panel in the brief time available for the October meeting. Also, many issues nominated were overlapping or largely the same, as might be expected from the interview technique employed. Therefore, a brief analysis and sorting process was used to organize the issues into sets, called "policy areas." Each policy area represented a common theme or group of concerns.

The analysis and sorting resulted in formulation of nine (9) policy areas that embraced a total of 71 consolidated issues from the interviews. Prior to the workshop, these nine policy areas and the consolidated issues associated with each, along with a summary of his or her remarks on each issue raised during the interview, were submitted to each interviewee for review. This feedback step was included to remove ambiguities in summarizing the discussions and to ensure that each interviewee's inputs were properly reflected in the material the advisory panel was to consider.

B. Design

Since only a limited time (two hours) was available to review, modify as necessary, and rate the items nominated, an approach had to be employed that would allow consideration and "voting" on a large body of information in a rapid but meaningful way. Thus, the workshop was designed around use of the CONSENSOR. The device is a voting machine that allows each participant at the meeting to vote anonymously on a subject being discussed, using his or her own small
terminal. The CONSENSOR allows each participant to offer an opinion on any question that can be answered on a scale of 0-10, while discounting his or her vote (for example, on how confident the voter is in the answer being correct).

During a meeting, the items to be considered are presented and described by the moderator, who then invites the participants to offer modifications or additional nominations (with reasons) about each of the subjects being considered. This is followed by the anonymous vote by the participants using the individual terminals. Answers from the participants are combined electronically and the results are displayed, after all votes have been registered, in the form of a histogram on a CRT (typically a standard TV set). Where there is a wide range of opinion, the moderator can reopen discussion and call for a revote, a procedure that often leads to better understanding among the participants and often to improved consensus on the question under consideration.

In this case, the specific objectives of the meeting were to:

- Briefly review and, as necessary, modify the policy areas and issues
- Rate the policy areas, selecting those most important to Army policy considerations
- Rate the importance of the issues associated with each policy area, beginning with the most important area(s).

The resulting material was intended to help in the selection, by the Arroyo Center Policy Committee, of the policy analysis program for the Arroyo Center during fiscal year 1984. As in the case of the interviews, a workbook was prepared for use by the participants at the meeting. The workbook described the objectives of the meeting, the steps involved and the material to be discussed, modified and rated.
C. Conduct

During the first part of the workshop, the moderator reviewed the workbook material that had been prepared and distributed prior to the meeting. The participants then were invited to offer modifications and nominations (with reasons) for each policy area and its related issues. Following minor modifications and additions (indicating that the process of generating and feeding back material was effective), the participants rated each policy area. Then the issues associated with each of the top-three policy areas, judged most important by the group, were rated for importance in the same manner.

As noted earlier, to provide the rating of importance (in terms of the need for current Army policy analysis) the participants used a voting machine called the CONSENSOR. The device allowed each voter (see Table II for workshop participants and observers) to provide his or her opinion anonymously about the subject being discussed by using a small, individual terminal. Each voter was asked to consider the following criteria when judging the importance of a policy area or related issue:

- Its potential impact on the Army: e.g., on the Army's ability to accomplish its goals
- The lead time to address the item: i.e., the time to fully understand the area/issue, formulate policies and take actions
- The possibility of undesirable conditions being created for the Army if it does not better understand the area/issue: e.g., irreversible loss of degrees of freedom in choosing policies or various actions
- Likelihood that the policy studies will provide results that can really be implemented: i.e., that recommendations are likely to generate actions and not provide "another report that goes nowhere."

If a participant believed the item under consideration was likely to have a high impact, require long lead time to understand, close off options if ignored or investigated at a later date, and provide useful, actionable results, he or she was asked to rate it as most important to study now—and give it a rating of ten (10). If he or she believed that an item
### Table II
WORKSHOP ATTENDEES

<table>
<thead>
<tr>
<th>Arroyo Center Advisory Panel (The Voters)</th>
<th>Observers</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEN Thurman,* VCSA (Co-chairman)</td>
<td>Arroyo Center</td>
</tr>
<tr>
<td>Dr. Sculley,* ASA (RDA) (Co-chairman)</td>
<td>Dr. Montgomery, Director</td>
</tr>
<tr>
<td>Ms. Crawford, GC</td>
<td>Dr. Goldsmith</td>
</tr>
<tr>
<td>LTG Thompson, DCSLOG</td>
<td>Dr. Mackin</td>
</tr>
<tr>
<td>LTG Merryman, DCSRDA</td>
<td>Army</td>
</tr>
<tr>
<td>LTG Mahaffey, DCSOPS</td>
<td>Ms. Hoeber, PDASA (RDA)</td>
</tr>
<tr>
<td>Mr. Hillier, ASA (IL&amp;FM)</td>
<td>Dr. Prather, DASA(RDA)</td>
</tr>
<tr>
<td>Mr. Hollis, DUSA (OR)</td>
<td>Dr. Dunn, SPMO</td>
</tr>
<tr>
<td>MG Noah, D/PAED</td>
<td>COL Carroway, O/DCSLOG</td>
</tr>
<tr>
<td>BG Conrad,* D/MD</td>
<td>COL Hazen, O/DCSOPS</td>
</tr>
<tr>
<td>Ms. Langston, D/SPMO</td>
<td>COL Landgraf, O/DAS</td>
</tr>
<tr>
<td></td>
<td>COL Stanley, O/DCSPE</td>
</tr>
</tbody>
</table>

Moderators (The Futures Group)

Mr. Becker
Mr. Goodrich

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*Member, Arroyo Center Policy Committee.
under consideration was of little or no importance and should not be studied now, it was to be rated zero (0). The CONSENSOR also allowed each participant to choose intermediate points on the above scale. Finally, a second knob on the terminal used by each participant allowed the voter to discount his vote—in this case by the degree of confidence he or she had in the answer being correct.

Prior to each vote, the participants were again asked to offer any opinions they believed should be considered. Then the votes were registered and answers from all participants were combined electronically and displayed in the form of a histogram on a television monitor. In certain cases, when there was a wide range of opinion (i.e., a weak consensus, or a dissensus) the moderator reopened the discussion and usually called for a revote. Results of the final votes (on the nine policy areas and the 33 issues embraced by the three most important areas) were then recorded, a few of which are shown in the following section.

D. Results of the Process: An Overview

Table III presents, in descending order of importance, the results of ratings by the Arroyo Center advisory panel on the nine policy areas. This is followed by a printout of the final vote on the highest-rated policy area followed by the printout of the highest-rated issue associated with this policy area.

Time allocated to this CONSENSOR meeting did not allow rating of issues associated with more than the top-three policy areas. Volume I of the 11 October 1983 report on this project presents charts showing the distribution of all the votes. Volume II of that report also presents the complete set of nominated issues and associated background information, arranged for easy reference in descending order of importance according to the results from the meeting.
Table III

THE POLICY AREAS

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Mean*</th>
<th>Weight, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing and Managing New Technologies and Modernization</td>
<td>8.6</td>
<td>88</td>
</tr>
<tr>
<td>Recruiting/Staffing, Retention and Utilization of the Available Personnel</td>
<td>8.5</td>
<td>95</td>
</tr>
<tr>
<td>Strength and Readiness, in Light of Prolonged Conflict</td>
<td>8.2</td>
<td>88</td>
</tr>
<tr>
<td>Means to Realistically Assess the Total Readiness</td>
<td>7.9</td>
<td>84</td>
</tr>
<tr>
<td>Definition of the Full Scope of Army Roles and Missions</td>
<td>7.5</td>
<td>90</td>
</tr>
<tr>
<td>Army Responsibilities to the U.S. Public and Citizens of Other Nations</td>
<td>7.0</td>
<td>88</td>
</tr>
<tr>
<td>U.S. Relationships with and Military Commitments to Other Nations</td>
<td>6.2</td>
<td>84</td>
</tr>
<tr>
<td>Influence of Economic Conditions and the Budgetary Process</td>
<td>6.0</td>
<td>82</td>
</tr>
<tr>
<td>Internal Organizational Efficiency and Relationships with the Overall DOD</td>
<td>5.8</td>
<td>81</td>
</tr>
</tbody>
</table>

*The mean is the mathematical average of the vote, including the discount by each voter of his vote on how confident he or she was in the answer being correct. The confidence is designated as "weight," where the voter could choose zero (0), twenty-five (25), fifty (50) or one hundred (100). Zero (0) completely discounted a vote, fifty (50) gave a vote one-half weight, one hundred (100) gave it full weight, etc. The weights shown here and for each vote on the following pages are the average weight of all voters.*
Policy Area: Developing and managing new technologies and modernization in a manner that maintains readiness to deter or defeat threats from the Soviets and any others.
Issue: Ability to manage the modernization process, including acquisition, distribution and training for all components.
APPENDIX

CHALLENGES LIKELY TO FACE THE U.S. ARMY IN THE POST-POM PERIOD

ISSUES UNDERLYING POLICY ANALYSIS NEEDS

Interviews With Army Management

by

The Futures Group
76 Eastern Boulevard
Glastonbury, Connecticut 06033
AGENDA

- Introduction
- Background
- Objectives of the Interview
- Interview Design
- Likely Challenges
- Driving Forces/Scenarios
- Sample Issues
- Relative Importance
BACKGROUND

Challenges facing the Army arise from many conditions and forces for change in the United States and abroad. Certain issues that should be addressed are clear since they stem from current conditions or from conditions obvious in the near term. But, many conditions likely to face the Army can impact on areas that involve long lead times. Thus, factors that can and should shape current policies and actions require insight about conditions many years in the future.

The Army Study Program Management Office (SPMO) has established a program to spotlight issues in the post-POM period: from 1990 to at least 2000. Our project, which includes personal interviews, is directed at helping SPMO spotlight and rank issues important to Army policy. These interviews with Army management are intended to provide each interviewee an opportunity to nominate issues on the basis of a longer time horizon than the pressure of short-term problems often allows.

WHO WE ARE

The Futures Group is a management consulting firm specializing in planning, forecasting and policy analysis for government organizations and business firms here and abroad. It helps clients make decisions in light of uncertainties about the future and has developed techniques to help people realistically spotlight future possibilities, their implications and what could or should be done about those conditions. The interview technique, and subsequent meeting and workshop using material developed in these interviews, are two of the approaches developed and successfully used in our work since the early 1970s.
OBJECTIVES OF THE INTERVIEW

This interview is intended to obtain your views about conditions in the United States and abroad from 1990 to at least 2000, plus the issues they are likely to create requiring current attention by the Army. If time permits, we would like you to rate the issues in terms of their relative importance regarding current Army policy and actions. In addition to likely issues, there may be other less likely but highly important items you believe should be treated. The issues that emerge from this series of interviews will be presented and discussed at a meeting on 3 October 1983 among Army management. At that meeting each participant will have an opportunity to review all the inputs, along with the reasons given, offer modifications and additions and then rate the importance of the issues being considered. One use of the material resulting from the meeting will be to help focus and structure policy studies to be accomplished by the Arroyo Center of the Jet Propulsion Laboratory at the California Institute of Technology.

In summary, our interview will seek your views on conditions here and abroad that could create issues, the resulting issues you believe should be considered and their implications for the Army. We hope these issues will include cross-functional items and represent top management concerns, especially since none of the material is intended for publication.

A.4
INTERVIEW DESIGN

The areas we hope to cover with you--i.e., our basic questions--are:

I Conditions in the United States and abroad that could create issues for the Army

- What are the various socioeconomic, political, technological and other driving forces that are likely, or that could create, important challenges for the Army?

- How might such forces combine or come together--i.e., what scenario(s) should be considered?

II Issues created by these conditions

- What specific issues are likely to be associated with the above conditions?

- Why are these issues likely to exist; i.e., what are the linkages among the conditions you see and the issues they are likely to create?

III Relative importance of each issue

- What is the relative importance or priority that should be attached to each issue on the basis of its timing and impact on the Army, and thus on the current need to give attention to it from a policy analysis standpoint?

A.5
POTENTIAL DRIVING FORCES

This list is simply offered to convey the scope of our discussion.

**Domestic**
- Demographics
- Economics
- Regulations and Legislation
- Politics and Foreign Affairs
- Social Values and Attitudes
- National Infrastructure
- Technology

**Foreign**
- Demographics
- Economics
- Politics and Foreign Affairs
- Social Values and Attitudes
- Infrastructure and Industrial Capacity
- Natural Resources

What follows is a set of conditions, or driving forces, and a set of sample issues with additional detail to help stimulate the discussion.
POTENTIAL DRIVING FORCES

- DOMESTIC -

Demographics
- Aging Population (Fewer Young Adults)
- Growing Ethnicity (Many Non- or Poor English Speaking)
- Growing Minority Population
- Illegal Immigration (Many Noncitizens)
- Population Mobility
- Single-Parent Households
- Educational Level (Literacy, Skills)
- Divorce Rate
- (Other?)

Economics
- Real GNP Growth (Level, Cyclicality)
- Structural Unemployment
- Inflation (Level, Volatility)
- Deficit Spending
- Welfare Spending (Social Security, Unemployment, Medical)
- Foreign Exchange
- Balance of Payments
- Multinational Corporations

Regulations and Legislation
- Tax Structure
- Income Redistribution
- Work, Health and Safety
- Trade Barriers, Protectionism (Quotas, Tariffs)
- Environmental Protection
POTENTIAL DRIVING FORCES

- DOMESTIC (CONT.) -

Politics and Foreign Affairs

- Type and Level of Foreign/Military Aid
- Declining Power and Economic Dominance of Western World
- Changing Emphasis on Outer Space for Military Purposes

Social Values and Attitudes

- Military Spending (Level, Type)
- Universal Military Training and Reserves (Professional Army)
- Foreign Involvements (Developed/Developing Nations)
- Male/Female Roles (e.g., Combat Exclusion)
- Individual Freedom Versus Conformity/Discipline/Cohesion
- Terrorism
- Work Ethic (Self-Actualization, Leisure)
- Materialism
- Ethnicity, National Loyalties

National Infrastructure

- Industrial Capacity (High Tech, Heavy Industry)
- Communications
- Transportation (Ground, Sea, Air)
- Natural Resources (Energy, Minerals, Water)

A.9
POTENTIAL DRIVING FORCES

- DOMESTIC (CONT.) -

**Technology**

- Levels of R&D Spending (Public, Private)
- Electronics Revolution
- Agriculture
- Small Arms Technology

- Biotechnology
- Materials
- Energy

A.10
POTENTIAL DRIVING FORCES

- FOREIGN -

Conditions in the following major regions could create issues for the Army, in the post-pom period, that should be addressed now.

- North America
- Latin America
- Western Europe
- Eastern Europe and U.S.S.R.
- Middle East
- South Asia
- East Asia
- Africa

Would you like to address any specific regions first?

A.11
POTENTIAL DRIVING FORCES

- FOREIGN (CONT.) -

Demographics

- Population Size
- Population Growth Rate
- Age Distribution
- Educational Level
- Urbanization
- Ethnic Shifts (Social/Racial)
- Labor Force
- Foreign Workers
- Unemployment
- Dependency Ratio
- Immigration, Emigration (Legal, Illegal)
- (Other?)

Economics

- GNP
- Inflation
- Regional Disparity in GNP Growth
- Disposable Income
- Foreign Exchange Rates
- Balance of Payments
- Regional Communities (e.g., EEC)
- Monetary System (International, Regional, National)
- Debt (Public, Private)
- Foreign Aid (Level, Type)
- Financial Reserves
- Trade Policies & Agreements
- Protectionism
- Cartels
POTENTIAL DRIVING FORCES

- FOREIGN (CONT.) -

Politics and Foreign Affairs
- Political Instability
- Territorial Disputes
- Land Reform
- Alliances, Alignments
- Arms Transfers, Military Assistance
- Regional Integration, Enlargement
- Balance of Power (Concentration, Diffusion)
- Armed Forces (Capabilities, Weaponry)
- Underground, Guerrilla Activities
- Foreign Intervention

Social Values and Attitudes
- Religion
- Family Size
- Work, Employment
- Education (Control, Direction)
- Foreign Alliances, Military Involvement
- Nationalism
- Individual Freedoms
POTENTIAL DRIVING FORCES

- FOREIGN (CONT.) -

INFRASTRUCTURE AND INDUSTRIAL CAPACITY

- Education
- Agricultural Production, Food Supplies
- Health and Medical Care
- Transportation (Air, Land, Water)
- Communications
- Energy and Power
- Consumer Goods Industry (Capacity, Obsolescence)
- Military Production (Capacity, Obsolescence, Sophistication)
- R&D Activities (Level, Type, Sophistication)

NATURAL RESOURCES

- Land
- Energy Resources (Fossil, Nuclear, Other)
- Mineral Resources
- Renewable Resources (Forests, Water)
- Climate
- Arable Land
SAMPLE ISSUES

Readiness

- Adequacy of Army Doctrine for the Time Period
- Adequacy of Organizational Systems
- Soviet Emphasis to the Exclusion of Other Potential Enemies/Threats
- Authority for Control of Tactical Nuclear Weapons

Human Resources

- Adequacy of Recruiting and Retention at All Levels Due to Competition with Private Sector
- Cost of Retirement Programs
- Effects of Volunteerism, Womanization and Liberal Lifestyles on Discipline and Esprit
- Heavy Requirements for Noncombat Activities (e.g., Peacekeeping, Evacuation, Relief, Refugee Control)

Leadership

- Ability to Retire or Terminate Incompetent Officers, Noncoms and Civilians
- Growing Acceptability of Resisting Direct Orders
- Public Concerns about Military Domination of National Policy
- Combat Command of Various Ethnic Groups

A.16
SAMPLE ISSUES

MATERIEL

- Adequacy of R&D (Focus and Level)
- Adequacy of Logistical Support and Communication Systems (Deployment and Supply)
- Vulnerability, Cost, Reliability, Availability, Maintainability and Training Requirements Associated with Increasing Equipment Sophistication
- Approaches to Cross-Service Logistics
- Proliferation of Modern Weapons (Especially to LDCs/Third World)

FUTURE DEVELOPMENT

- Adequacy of Special Forces To Meet Worldwide Situations
- Need and Ability To Have Access and Control of Civilian Capabilities in Wartime Situations
- Potential Requirements in Light of Major Disarmament Agreements (E.g., Nuclear, Chemical, Biological)
- Role of Automation and Robotics in All Army Missions

STRATEGIC DEPLOYMENT

- Economic Burden of Permanent Deployment
- Armament/Rearmament of Previous Adversaries
- Continued and/or Growing Disagreements Within Alliances
- Transfer of All or Partial Control of Nuclear Weapons to Allies

A.17
SAMPLE ISSUES

Management

- Adequacy of Linkage Among Army/Organization/Individual Goals (Civilian and Military)
- Adequacy of Decision Support Systems (Strategic and Tactical)
- Demands of Administrative Workloads and Effects on Unit Efficiency
- Actual Relationships Among Military and Civilians
- Centralization of Decisionmaking Associated with Advanced Computation and Communication Hardware/Software
- Risks of Erroneous Decisions
END DATE FILMED 8-88 DTIC